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An Essay on Flexibility

As a martial artist with many years of experience, I have had the good fortune of learning and testing out many kinds of stretching. I have found that it is important to have a variety of “active flexibility” stretches where one uses muscular control to help affect the range of motion of the stretching technique. Yoga and Pilates postures have been very effective for me and my martial arts students in helping “open up” not only the hamstrings and shoulders, but correct postural problems in our backs and help strengthen the back muscles while doing so. This is very desirable for practicing martial arts, and for many types of resistance training. I can imagine that performing many types of Olympic lifts would be greatly assisted by improving one’s posture, back strength, and spinal health.

Static stretching, from my experience, is not conducive to resistance training, which is supported by research. I have found that performing dynamic stretching – joint rotations and so forth – form an integral part of any warmup routine. This is very important for warming up the joints and muscles that are specific to the workout, and it also lubricates the joints with synovial fluid, allowing for improved function of the joints.

This is necessary for skill work such as in martial arts, gymnastics and so forth, as well as resistance training of almost any kind. As an example, before we train any Aikido techniques, we carefully practice wrist rotations and wrist stretches. These help prevent injury to the wrists when practicing the various wrist lock techniques, and the stretches also help us to further ingrain the motions of the techniques. In this way, such stretches have “joint specificity”. There are many examples of such joint specific stretches that assist in martial arts techniques.

As far as resistance training goes, we have indeed found that it does contribute to increased joint flexibility. I previously mentioned Yoga and Pilates. These disciplines do tend to help build strength throughout the full range of motion of the exercises, as well as balance and posture. Similarly, other disciplines of body weight movements have been very helpful in not only building strength in “natural” movements, but balance, coordination, and agility. Such movements include various pushing, pulling, and squatting exercises, and many more.

As an example, I generally start most new, untrained karate students with a short list of Judo style stretches and kneeling pushups, or wall pushups if necessary. Such pushups are fairly remedial exercises that allow students to learn the basic form, and help stretch out the muscles and joints while using the muscles to stay in control of the motion. Developing muscular control is a very important concept in both flexibility and martial arts. There are remedial variations of almost any exercise one can imagine, especially in calisthenics. The position, leverage, and range of motion may be adjusted in any calisthenics technique such that it can be made more difficult (progressing the technique) or less difficult (regressing the technique).

Of course, during pushing movements, the antagonistic muscles hold some tension, and the stabilizer muscles also get some training via holding correct posture and balance. Once a set of pushing movements is completed, pulling movements are practiced to help stretch out the muscles and joints on the other side. An example remedial exercise for pulling is standing pulls, where one places one’s hands on either side of a pole, beam, or any other sturdy object or piece of furniture that one can safely put one’s hands around.

As the student progresses in muscular control, his or her technique improves and will be able to perform more “high quality” repetitions. Also, as the student continues practicing these techniques, his or her range of motion will generally deepen, allowing him or her to make the exercise more difficult, as well as improve his or her own active flexibility. An example is performing wide stance body weight squats half way down at first. This functions as not only a resistance exercise, but also a stretch for the quadriceps where most of the muscles of the legs are involved in the exercise.

Another great exercise is body weight calf raises. These help stretch out the calf muscles as well as the Achilles tendon. Any menu of squats and calf raises is greatly supplemented by ankle rotations and “runner’s stretches” (similar to lunges). As flexibility and muscular control improve in calf raises, one can practice them with one foot and / or off a step. Of course, it takes time and dedication with squats and calf raises to build up balance, and flexibility in the ankles. The key point is not to rush things and gradually develop the flexibility needed to keep the heels planted in the bottom portion of squats. Calf raises and ankle rotations help immensely with this.

Naturally, connective tissues will get stretched and strengthened by practicing such techniques. Simply holding tension (via muscular control) will work the ligaments and tendons. Also, going through the proper ranges of motion in these techniques stretches them and helps one’s body learn correct movements and postures. As such, not only can one build muscular control, posture, balance, general proprioception and kinesthesia, flexibility, and skill, but joint integrity and strength in ligaments and tendons. This helps maintain joint health and prevent injury.

Maintaining strength balances in the body allows one, also, to maintain natural ranges of motion. Asking any gymnastics coach about building shoulder health and flexibility will certainly yield much useful advice on the topic. It can be argued, especially from a gymnastics perspective, that excellent upper body flexibility is required to learn more advanced body weight techniques. Also, to quote an article by a gymnast, “Keeping the shoulders (glenohumeral / scapular articulations) operating optimally is the key to bodyweight strength success.”

Referenced article - “The Fundamentals of Bodyweight Strength Training” by Steven Low, posted at the site below -
http://www.eatmoveimprove.com

Light, gentle stretching as a part of cool downs has helped me and my martial arts students reduce post workout pain. This usually involves partner assisted stretching and massage to help “detox” the affected joints and muscles of waste products and so forth.

So, as you can see by my approach to body weight training, calisthenics can be very holistic in nature, help with flexibility, and provide light, moderate, and even very high levels of intensity for strength training. My overall approach to strength and flexibility is based around my years of experience in martial arts, progressive calisthenics, and gymnastics, as well as experience and research into other disciplines (ballet, parkour, Yoga, Pilates, etc.), and training with other instructors.